Claims

1. A control valve for a fluid circulation circuit, comprising a body (12) which is equipped with a fluid inlet (18) and with at least two fluid outlets (20, 22, 24) and which delimits a housing of revolution for an adjusting element (26) able to rotate about an axis of rotation (XX) and to adopt various angular positions to control the distribution of fluid through the outlets, the body (12) comprising an end wall (14) into which the fluid inlet opens and a side wall (16) into which the fluid outlets open,
characterized in that the adjusting member (26) is surrounded by a sealing ring (42) in the form of an open annulus, which rotates as one with the adjusting member (26) and is arranged with a small clearance (j) around the adjusting member, this allowing the sealing ring to be pressed firmly internally against the side wall (16) with a view to ensuring sealing under the action of the pressure (P) of the fluid.

2. The control valve as claimed in claim 1, characterized in that the sealing ring (42) is made of a material with a low coefficient of friction.

3. The control valve as claimed in claim 2, characterized in that the material with a low coefficient of friction is chosen from polyamides and polytetrafluoroethylene.

4. The control valve as claimed in one of claims 1 to 3, characterized in that the sealing ring (42) comprises a smooth exterior surface into which a multitude of uniformly spaced blind holes (62) open, this making it possible to reduce the area of contact between the sealing ring (42) and the side wall (16).

5. The control valve as claimed in claim 4, characterized in that the ratio (R) between the surface area (ST) of the blind holes (62) and the smooth surface area (SL) of the sealing ring (42) is between 25% and 40%, preferably close to 33%.

6. The control valve as claimed in one of claims 4 and 5, characterized in that the blind holes (62) have a circular contour.

7. The control valve as claimed in claim 6, characterized in that the blind holes (62) have the form of caps of a sphere.

8. The control valve as claimed in one of claims 1 to 7, characterized in that the adjusting member (26) and the sealing ring (42) have reliefs (58, 60) of mating shapes to allow them to be made to rotate as one.

9. The control valve as claimed in one of claims 1 to 8, characterized in that the side wall (16) of the valve body delimits a cylindrical housing and in that the sealing ring (42) has a cylindrical exterior surface.

10. The control valve as claimed in one of claims 1 to 8, characterized in that the fluid inlet (18) opens axially into the end wall (14), and in that the fluid outlets (20, 22, 24) open radially into the side wall (16) of the valve body.

11. A fluid circulation circuit, characterized in that it comprises a control valve as claimed in one of claims 1 to 10, the fluid inlet (18) of which is connected to a fluid source (76) and the fluid outlets (20, 22, 24) of which are connected respectively to branches (78, 86, 84) of the circuit.

12. The fluid circulation circuit as claimed in claim 11, characterized in that it is produced in the form of a cooling circuit (70) for the combustion engine (72) of a motor vehicle, through which a cooling fluid passes under the action of a circulation pump (74), and in that the control valve (10) is a three-way valve, the fluid inlet (18) of which is connected to an intake (76) for cooling fluid arriving from the engine (72) and the three fluid outlets (20, 22, 24) of which are connected respectively to a first branch (78) of the circuit which contains a cooling radiator (80), to a second branch (84) of the circuit which bypasses the cooling radiator (80), and to a third branch (86) of the circuit which contains a heater matrix (88) for heating the cabin.